

## **Title of the Invention**

### **Semiconductor Plastic Package and Process for the Production Thereof**

This application is a divisional application of Serial No. 10/036,385, filed January 7, 2002, *now Patent No. 6,729,651* which is a divisional application of Serial No. 09/207,115, filed December 8, 1998, now Patent No. 6,376,908, issued April 23, 2002.

## **Field of the Invention**

[0001] The present invention relates to a novel semiconductor plastic package in the form of a semiconductor chip mounted on a small printed circuit board, and a process for the production of a double-side copper-clad laminate for use in the package. The semiconductor plastic package is feasible particularly as a high-watt and multi-terminal high-density semiconductor plastic package such as a microprocessor, a microcontroller, ASIC or graphic controller or processor. The present semiconductor plastic package is mounted on a motherboard printed circuit board with a solder ball for use as an electronic part or device.

## **Background of the Invention**

[0002] There are conventionally known semiconductor plastic packages such as a plastic ball grid array (P-BGA) and a plastic land grid array (P-LGA), which are structured by fixing a semiconductor chip on the upper surface of a plastic printed circuit board, bonding the semiconductor chip to a conductor circuit formed on the upper surface of the printed circuit board by wire-bonding, forming a conductor pad for connection to a motherboard printed circuit board on the lower surface of the printed circuit board with a solder ball, connecting front and reverse circuit conductors through a plated through-hole and encapsulating the semiconductor chip with a resin. In the above known structure, a plated heat-diffusible through-hole for connection from a metal foil on the upper surface for fixing